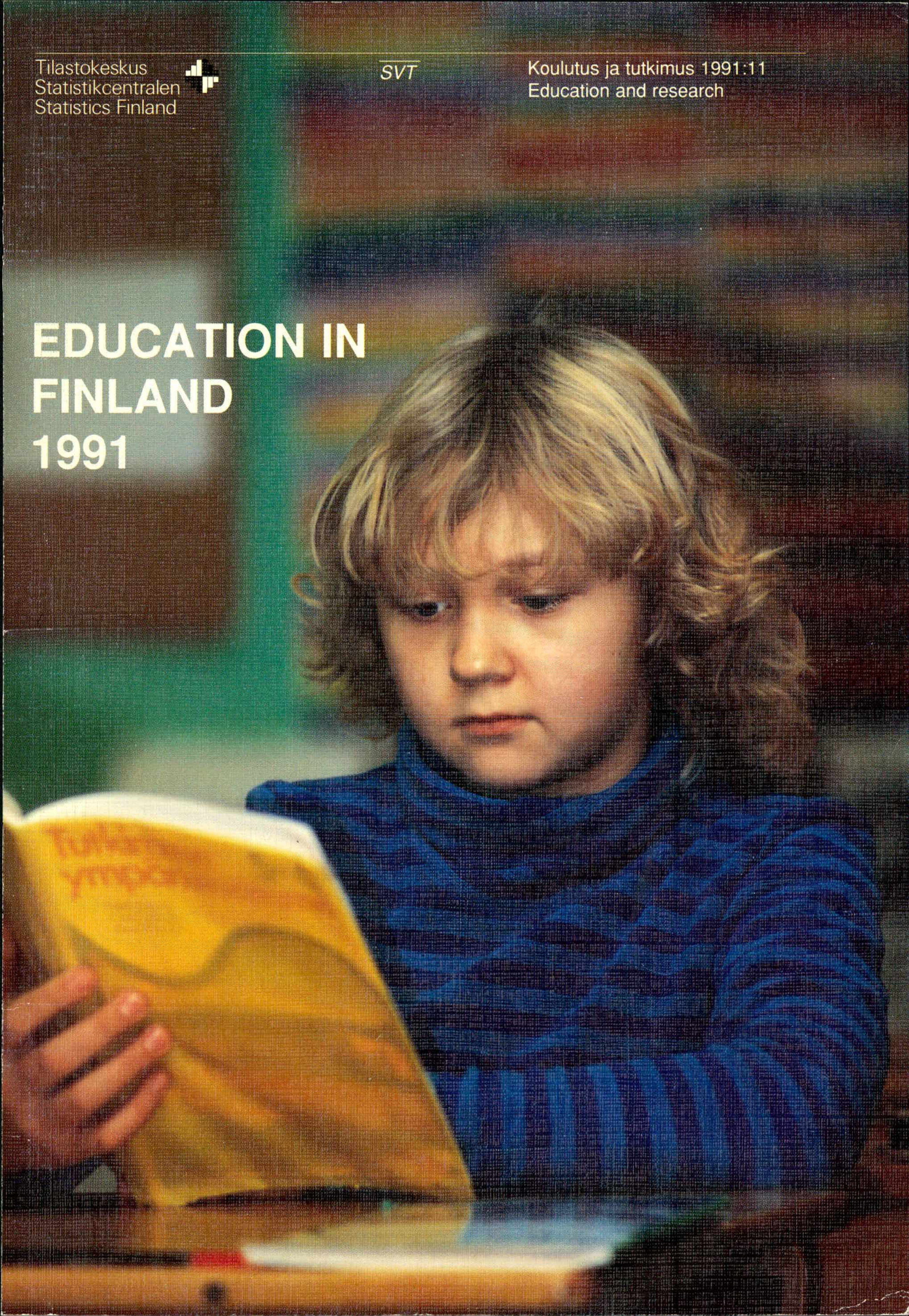

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Foreword

Statistics Finland (formerly, the Central Statistical Office of Finland) is a government body engaged in the compilation and publication of statistics concerning conditions in Finnish society. The purpose of the Education Statistics Division is to collect and analyse data related to the education system, educational achievement among the population and adult education, and to publish statistics, statistical surveys and standard classifications.

Koulutus — Education in Finland 1991 is the first collection of statistics covering the entire sphere of education in Finland, and is intended to be published every second year. Each edition will contain the latest information and updated statistical time-series, international comparisons and scientific articles.

The review in English monitors significant developments and points out trends in major aspects of education in this country, using international concepts and classifications to provide basic information on the regular education system and other forms of education. The statistics are regrouped to conform to the Unesco International Standard Classification of Education (ISCED). "Education in Finland 1991" is also available as an offprint, copies of which can be obtained from Statistics Finland.

Following a brief general orientation, "Finland at a Glance", this English review is composed of six sections. The first will provide a general idea of the structure of the Finnish education system and the principal nature of the various educational levels in accordance with the ISCED classification set up by Unesco. The classification will be discussed in more detail in the publication *ISCED KEY* (a conversion key for comparisons between the Finnish Standard Classification of Education and ISCED, 31.12.1988, Appendix 1).

The section "Educational institutions and enrolment" contains data on education at the pre-primary, comprehensive school, upper secondary, vocational and university levels and on students attendance. Section 3 in turn discusses students choices of educational institution and the qualifications completed, while section 4 contains a brief summary of the numbers of teachers and expenditure of the various educational institutions. Section 5 provides data on educational achievement among the population, and the final section information on adult education.

The aim is to expand the scope of the data continuously and develop various indicators of the state and efficiency of the education system. International comparisons will also be included as they become available.

We hope that you will find the material helpful and invite you to provide us with comments on ways of making future editions even more useful.

Koulutus — Education in Finland 1991 and 'Education in Finland 1991' are sold by Statistics Finland.

Heikki Havén
Head
Education Statistics Division
Statistics Finland

Contents

FINLAND AT A GLANCE



Republic of Finland

- Area: 338 thousand sq. km, making Finland the sixth largest country in Europe
- Borders in common with Sweden, Norway and the Soviet Union
- Composition of area: 65 % forest, 10 % inland waters, 8 % cultivated land, 17 % other
- A parliamentary democracy with a multiparty system of government
- A neutral country not a member of any military alliance
- Finland is one of the Nordic countries
- Capital City: Helsinki; half a million residents

Population

- Size: five million, placing Finland among the smallest countries in Europe
- Urban population: 65 %
- Birth rate: one of the lowest in Western industrialized countries
- Population of working age: percentage one of the highest in the world
- Religious affiliation: 88 % members of the Lutheran Church
- Official languages: Finnish and Swedish (proportion of Swedish-speaking population 6 %)

Employment

- Labour force: 2.5 million; 52 % men, 48 % women
- Labour force participation: men 73 %, women 64 %
- Employer sectors: private 71 %, public 29 %
- Industries: primary 8 %, secondary 31 %, services 61 %
- Unemployment (1990): 3.5 %

Population by age 1950–2020

		Age group				
	Thousands	Total %	0–14 %	15–64 %	65– %	0-year-olds Thousands
1950	4 030	100	30	63	7	96
1960	4 446	100	30	63	7	79
1970	4 598	100	24	67	9	61
1980	4 788	100	20	68	12	63
1990	4 998	100	19	67	14	65
2000 *	5 051	100	17	68	15	54
2020 *	4 916	100	16	63	21	49

* Projection: Central Statistical Office of Finland

Employment by sector 1990

	1990 Thousands	%	1950	%
Agriculture and forestry	207	8.5	915	46.1
Manufacturing and construction	761	30.8	532	26.8
Trade, transport, education, health, other services	1 496	60.7	537	27.1
Total	2 464	100.0	1 984	100.0

Economy

- Currency: *markka* (Finnish mark), FIM
- Gross domestic product (1990) FIM 524.781 million (USD 136.697 million)
- Gross domestic product per capita (1990): FIM 105 thousand (USD 27.4 thousand), placing Finland among the richest countries in the world
- Exports (1990): contribution to gross domestic product 23 %
- Four most important trading partners (1990): Sweden, the Soviet Union, Germany, United Kingdom

1 Structure of the education system

The regular education system in Finland is composed of the comprehensive school, the senior secondary school, vocational and professional education institutions, and the universities. There are no actual pre-primary schools in Finland, but instruction of this kind is provided at day-care centres (kindergartens), which are under the jurisdiction of the social welfare administration, and in connection with the comprehensive schools. Although preprimary education in itself is not a part of the regular education system, it is nevertheless included in Fig. E.1.

In addition to the regular education system, formal education is also given in music schools and colleges and institutions of physical education, which provide training for both professionals and amateurs. Adult education is provided by folk high schools, adult education centres and summer universities. The military academies and military vocational institutes are not classified as belonging to the education system proper. A more detailed examination of the various groups of educational institutions is provided in the following pages.

The regular education system

The comprehensive school is compulsory and consists of nine forms, i.e. the primary school (forms 1–6) and the lower secondary school education (forms 7–9). In addition there is also a voluntary 10th form which attracts a small number of pupils.

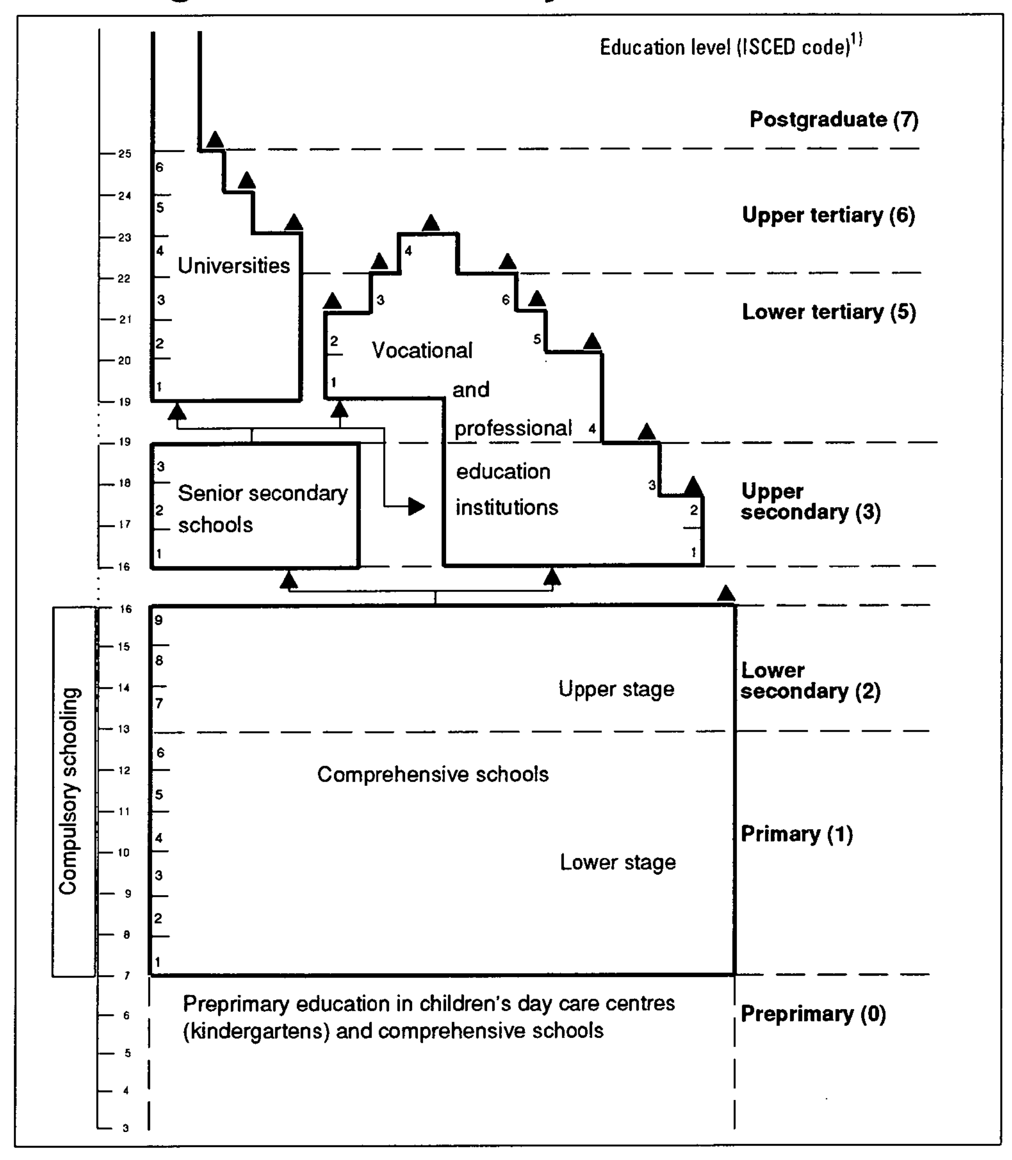
The comprehensive school is compulsory for the whole age group 7–16, including the disabled, while special facilities are provided for pupils who are so badly disabled or retarded that they cannot cope with ordinary instruction. This also applies to children who have adjustment problems caused by emotional disorders or some other factor and who thus require special education.

The subjects taught in the comprehensive school and the senior secondary school are defined by law, time allocation and optional subjects being decided on by the Government. The syllabus is essentially the same for all pupils, including those in private schools falling within the education system. All individuals completing the comprehensive school are provided with the same eligibility for further education.

Post-compulsory education is divided into general education given in the senior secondary schools and vocational education provided in the vocational and professional institutions.

The senior secondary school is a three-year educational institution providing post-comprehensive general education. The subjects in the curriculum are defined by law, and the government approves the number of hours devoted to each subject. The school concludes with a matriculation examination consisting of centrally administered tests which are identical for all senior secondary schools in the country, and tests administered by the schools themselves. The matriculation examination provides the pupils with a general qualification for higher education and other forms of education which require the completion of such an examination. Senior secondary schools also provide evening courses for adults.

E.1
The Regular Education System of Finland



[1] Unesco: International Standard Classification of Education (ISCED)

Preprimary	= 0	Education preceding the first level
Primary	= 1	First level
Lower secondary	= 2	Second level, first stage
Upper secondary	= 3	Second level, second stage
Lower tertiary	= 5	Third level, first stage not equivalent to the first university degree of equivalent
Upper tertiary	= 6	Third level, first stage, university degree of equivalent
Postgraduate	= 7	Third level, postgraduate university degree of equivalent

Nomenclature of types of educational institutions within the formal education system 31.12.1989

1 General education institutions
123 Lower comprehensive schools
124 Upper comprehensive schools
125 Private comprehensive schools
138 Special comprehensive schools
162 Senior secondary schools
164 Senior secondary evening schools
171 Teacher training schools
179 Other comprehensive and senior secondary schools
181 Music schools and colleges
183 Physical education institutes
191 Folk high schools
192 Adult education centres
199 Other general education institutions

2 Vocational and professional education institutions
211 Agricultural institutes
213 Forestry institutes
221 Technical institutes
223 Vocational institutes
225 Specialized vocational institutes
228 Special vocational institutes
229 Vocational course centres
231 Crafts and industrial arts institutes
232 Fine arts institutes
235 Commercial institutes
238 Maritime institutes
241 Nursing institutes
243 Social service institutes
245 Kindergarten teacher institutes
251 Home and institutional economics institutes
253 Hotel and catering institutes
261 Fire, police and security service institutes
299 Other vocational and professional education institutions

3 Universities and university-level institutions
311 Universities
315 Military academies

9 Other educational institutions within the formal education system
911 Military vocational institutes
921 Summer universities
925 Study circle centres
999 Other educational institutions within the formal education system

Vocational, technical and professional education is mainly provided in specialized institutions. An apprenticeship scheme exists, but the numbers pursuing this are very small, only about 3–4% of those studying in vocational and professional education institutions. Apprenticeship is regarded as belonging to adult education.

Vocational, technical and professional teaching is organised into 25 basic branches and further into more than 200 lines of specialisation. Vocational education at the upper secondary level usually takes 2–3 years and technical and professional education at the tertiary level 4–6 years. Students must previously have completed either the comprehensive school or the senior secondary school. Some courses providing education for specialized professions are open to matriculated students only.

The range of vocational and professional education provided is laid down by law, and the numbers of students admitted in each field, region and level are confirmed by the government. The principles which underlie the curricula are drawn up by the National Board of Education and revised by it where necessary. The vocational and professional education institutions also provide adult education.

The Finnish university system consists of 20 institutions, of which 10 are multi-faculty universities, three technical universities, three schools of economics and business administration, a veterinary college and three academies of art. A development programme for higher education is enacted by the government when necessary, to determine the numbers to be admitted to each faculty.

Each university is governed by a separate act of parliament, while the general aims and extents of the basic degree programmes and outlines for post-graduate studies are defined by separate decrees. One of the principles underlying university education in Finland is the close relationship between teaching and research. All the universities provide undergraduate and postgraduate education, confer doctorates and are required to carry out research. In addition, the universities provide professional in-service training programmes, courses and open university instruction.

Students must as a rule have matriculated before they can enter a university, although completion of a tertiary-level examination at a vocational and professional education institution provides them with the same eligibility as a matriculation examination. There are nevertheless only a few students who enter university via the latter route. A system of fixed entry numbers is employed in all fields of study. It takes 6–8 years to complete the first degree ('candidate' = master's degree), while a post-graduate degree (licentiate, doctorate) takes several more years.

Financing of education

The state and the local authorities own approx. 97% of the schools in the regular education system and the private sector approx. 3%. The comprehensive schools and senior secondary schools are generally run by the local authorities. Approx. 85% of the vocational and professional education institutions are owned by state or local authorities and approx. 15% by the private sector.

Education is free of charge for all pupils, and includes tuition, daily meals, social services and transportation for those living far away, for example. The local authorities and private educational foundations receive state grants to cover 33–51% of their establishment costs and 51–86% of their operating costs, depending on the economic potential of the local authority concerned. Most of the remaining costs are covered by the students' local authorities. Under certain conditions, pupils in the senior secondary schools and vocational and professional education institutions may receive financial aid from the state. The system of state grants for education is currently being revised, and the reform will be implemented in the early 1990's.

All universities are state-owned and financed by means of funds allocated directly from the state budget. University education is provided free of charge, but each student must pay a nominal union fee. Subject to certain restrictions, university students may also receive financial aid from the state.

2 Educational institutions and enrolment

Preprimary education

There are no actual preprimary schools in the Finnish education system, but preprimary education is provided in children's day-care centres (kindergartens) and comprehensive schools. The following figures are based on statistics compiled by the Ministry of Health and Social Welfare and by Statistics Finland.

Local authority day-care centres, which are a form of fee-paying social service, are also responsible for providing children with preliminary instruction. Thus all children aged 3–6 years who receive at least 20 hours of day care and syllabus-based instruction a week in local authority or private kindergartens are regarded here as attending preprimary education.

Some comprehensive schools have obtained special licences to arrange preprimary teaching in either preschool or combined classes. This is voluntary for the children and free of charge. Systematic 2-year pre-primary education is provided for severely disabled children, for whom the 11 years of compulsory education begins at the age of 6.

Approx. 7% of the children receiving preprimary education in the late 1980's were attending private schools or day-care centres.

The number of children receiving education at this level increased markedly during the 1980's, by an average of 3.5%, so that one third of all children aged 3–6 years and slightly over a half of those aged 6 years were doing so by the end of the decade.

It can be estimated from the pupil statistics compiled by the OECD that the proportion of children of preschool age receiving preprimary education in Finland is one of the lowest among the OECD countries.

E. 2
Participation in preprimary education 1981–1989

	Day-care centres (kinder-gartens)	Comprehensive schools	Total	Change from prev. year %	Participation rate (proportion of population aged 3–6 years) %
1981	65,301	768	66,069		25.5
1982	67,966	867	68,833	4.2	26.6
1983	69,704	870	70,574	2.5	27.5
1984	71,815	830	72,645	2.9	28.5
1985	74,927	1,170	76,097	4.8	29.5
1986	76,139	1,551	77,690	2.1	29.8
1987	79,488	1,795	81,283	4.6	30.9
1988	81,761	1,816	83,577	2.8	32.0
1989	84,739	2,067	86,806	3.9	33.9

Regular education system

There were 5,900 regular educational institutions in autumn 1990 with some 980,000 students and pupils. Approx. 3% of the pupils were attending private schools and 5.6% Swedish-speaking schools, the proportion of the latter corresponding well with that of the Swedish-speaking population in general. The data presented here are based on education statistics compiled by Statistics Finland.

Approx. 57% of the students in 1989 were studying at the primary or lower secondary level, i.e. in comprehensive schools, 20% at the upper secondary level, 15% at the tertiary level and 8% at the preprimary level. The slight decrease in the total

E. 3
Educational institutions and students in the regular education system by type of institution in 1990

Type of institution	Establish-ments	Pupils/Students		
		Total	In private institutions %	Receiving education in Swedish %
Comprehensive schools	4,845	583,700	0.9	5.5
Senior secondary schools	464	101,600	6.1	6.3
Other comprehensive and senior secondary schools	24	12,000	27.0	9.4
Vocational and professional education institutions	546	166,000	9.6	5.0
Universities	20	112,900	-	7.4
Total	**5,899**	**976,200**	**3.2**	**5.6**

E. 4
Educational institutions and students in the regular education system by type of institution and educational level[1] in 1989

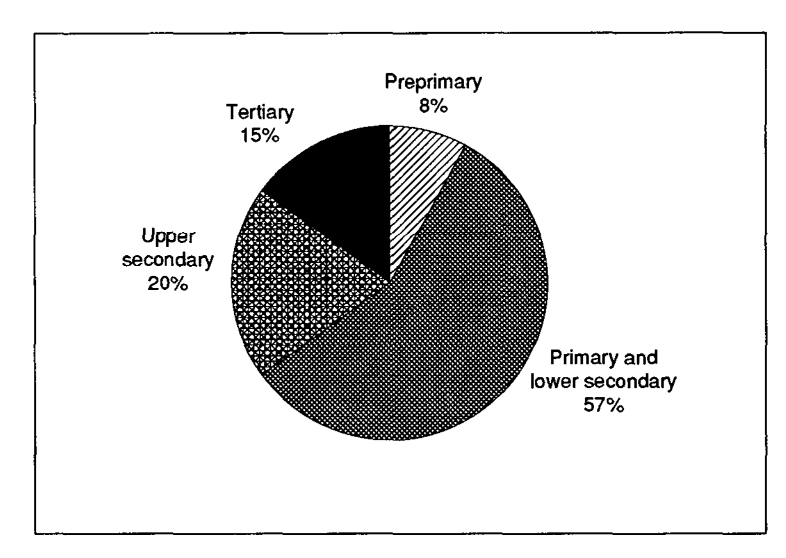
Type of institution	Establish-ments	Pupils/Students		Level of education (ISCED code)					
		Total	Females %	Pre-primary (0)	Primary (1)	Secondary		Tertiary	
						Lower (2)	Upper (3)	Lower (5)	Higher (6,7)
Comprehensive schools	4,844	578,005	49	1,820	382,387	193,798	-	-	-
Senior secondary schools	466	99,885	60	-	-	3,383	96,502	-	-
Other comprehensive and senior secondary schools	24	11,965	52	247	5,564	3,397	2,757	-	-
Vocational and professional education institutions	546	157,767	54	-	-	-	110,569	34,199	12,999
Universities	20	108,125	51	-	-	-	-	639	107,486
Total	**5,900**	**955,747**	**51**	**2,067**	**387,951**	**200,578**	**209,828**	**34,838**	**120,485**
Females %		51		45	49	49	56	63	48

[1] Unesco: International Standard Classification of Education (ISCED)

E. 5
Pupils and students in the regular education system and children receiving preprimary instruction in day-care centres (kindergartens) by educational level[1] in 1984–1989

	Level of education (ISCED code)										
	Pre-primary (0)	Primary (1)	Lower secondary (2)	Upper secondary (3)			Tertiary			Total
				General	Vocational	Total	Lower (5)	Higher (6,7)	Total	
	Thousands									
1984	73	374	199	111	116	227	26	97	123	996
1985	76	379	193	108	114	333	38	100	128	998
1986	78	387	185	105	113	218	30	104	134	1,002
1987	81	389	185	102	112	214	30	109	139	1,008
1988	84	388	191	100	112	212	32	115	147	1,022
1989	87	388	201	99	111	210	35	120	155	1,041

1) Unesco: International Standard Classification of Education (ISCED)



E. 6
Distribution of pupils by educational level (ISCED) in 1989

number of students in the early 1980's was followed by a rise towards the end of the decade, caused by the slight increase in the number of students attending compulsory education and the marked rise in the number of students at the tertiary level. The trend has also been rapid at the preprimary level.

More than 67,000 pupils began comprehensive school in autumn 1990, i.e. 0.7% more than in the previous year, while the number of pupils completing their compulsory education in spring 1990 was 61,000.

33,400 young people, of whom 58% were girls, began senior secondary school (excluding evening school students) in autumn 1990, their number being 8% higher than in the previous year. 27,500 students matriculated in 1990, i.e. 2% less than in the previous year.

E. 7
Vocational and professional education institutions by type in 1990

Type of institution	Establish-ments	Students Total	Change from previous year, %	New students	Graduations Total	Upper[1] secondary (3)	Tertiary[1] Lower (5)	Upper (6)
Agricultural	60	5,673	2.5	3,181	2,408	1,928	480	-
Forestry	25	2,602	4.0	1,481	1,332	511	540	281
Technical	32	20,296	8.4	7,655	4,897	13	2,778	2,106
Vocational	104	45,166	-0.6	18,124	15,358	15,220	138	-
Specialized vocational	27	1,819	0.3	1,543	362	260	102	-
Special vocational	16	1,933	4.9	957	708	704	4	-
Crafts and industrial arts	43	5,730	3.1	2,177	1,474	1,138	336	-
Fine arts	10	418	16.5	184	111	106	5	-
Commercial	69	33,474	3.2	15,477	11,918	11,329	589	-
Maritime	5	777	19.0	351	270	235	-	35
Nursing	48	25,060	12.7	11,471	6,996	3,141	3,775	80
Social services	27	8,506	29.1	4,118	2,657	2,359	298	-
Kindergarten teacher institutes	5	1,742	-0.7	620	580	-	-	580
Home and institutional economics	51	5,805	2.2	3,748	3,221	2,867	354	-
Hotel and catering	14	3,111	1.3	1,656	1,540	1,289	251	-
Fire, police and security services	3	929	2.0	894	909	889	20	-
Other vocational and professional education institutions	7	362	-4.7	302	329	279	50	-
Vocational and professional studies in general education institutions		2,615	5.4	912	596	204	306	86
Total	**546**	**166,018**	**5.1**	**74,851**	**55,666**	**42,472**	**10,026**	**3,168**
Change from previous year, %	0	5.1		3.3	-3.4	-1.8	-8.5	-7.1

1) Unesco: International Standard classification of Education (ISCED)

74,900 students i.e. over 3% more than in the previous year, began studying at vocational and professional education institutions in 1990, while the number admitted to the upper secondary level decreased by 2% and that admitted to the tertiary level increased by 10%. The greatest increase occurred in the number of students in institutes of nursing, social services and technology, 38% of the new students having matriculated. 55,700 qualifications were obtained in 1990, i.e. 3% less than in the previous year.

More than half of the students in vocational and professional education institutions were women (54%), the proportion varying by field of education. As indicated in Table E. 9, there was no field of education in 1989 in which the proportion of men and women was equal (41–60% men and women).

There were a total of 113,000 students attending universities in Finland in 1990, i.e. over 4% more than in the previous year. The fields with the highest numbers of students in 1989 were the humanities, engineering, business administration and teacher education. The number of students admitted to universities in 1990 was 16,000, i.e. 2.6% more than in the previous year. Women constituted 51% of the total number of students and 56% of the new students.

10,300 persons completed a university degree in 1989, i.e. 2% less than in the previous year, including 900 postgraduate degrees, of which 500 were licentiate

E. 8
Universities in 1990

	Students in 1990	Change from previous year, %	New students	Degrees in 1989 Total	Upper tertiary Bachelor	Upper tertiary Master	Postgraduate Ph.D. and other equivalent Licentiates	Postgraduate Doctors	Other degrees
Multi-faculty universities									
University of Helsinki	28,554	3.3	3,471	2,546	221	1,853	161	165	146
University of Turku	11,168	5.8	1,523	1,022	148	749	33	51	41
Åbo Akademi University	4,816	1.6	686	405	47	330	19	9	-
University of Oulu	9,480	4.4	1,395	939	61	728	41	37	72
University of Tampere	10,899	1.0	1,387	1,012	193	672	27	26	94
University of Jyväskylä	7,777	5.4	1,342	1,053	236	750	44	23	-
University of Kuopio	3,351	10.9	642	407	69	217	16	28	77
University of Joensuu	4,963	4.9	836	446	104	318	15	9	-
University of Vaasa	2,156	4.8	393	237	-	234	3	-	-
University of Lapland	1,638	11.3	302	131	4	121	3	3	-
Specialized universities									
Helsinki University of Technology	10,737	4.8	1,265	705	-	592	84	29	-
Tampere University of Technology	5,059	10.5	843	313	-	270	33	10	-
Lappeenranta University of Technology	2,294	9.8	437	161	-	149	9	3	-
Helsinki School of economics and Business Administration	3,467	2.0	436	311	-	301	6	4	-
Swedish School of economics and Business Administration	1,798	0.1	301	210	-	205	2	3	-
Turku School of Economics and Business Administration	1,724	2.3	258	167	-	165	2	-	-
College of Veterinary Medicine	332	4.7	43	29	-	25	-	4	-
Colleges of Art									
Sibelius Academy	1,323	5.9	197	135	34	101	-	-	-
University of Industrial Arts	1,117	7.0	169	56	-	56	-	-	-
Theatre Academy	268	10.7	51	8	-	8	-	-	-
Total	**112,921**	**4.4**	**15,977**	**10,293**	**1,117**	**7,844**	**498**	**404**	**430**
Change from previous year, %	4.4		2.6	-2.2	-19.7	-3.1	-2.7	1.0	250.4

degrees and 400 doctorates. The number of postgraduate degrees completed began to rise rapidly in the late 1980's.

The various institutions in the regular education system are located evenly throughout the country, but as Finland is sparsely populated and the population density is much higher in the south than elsewhere, the units vary considerably in size. The smallest comprehensive school in existence in 1990 had only 2 pupils and the largest 1,004 pupils, while the average size was 120 pupils. Every one of the 460 local authority districts has at least one comprehensive school and every second one a senior secondary school, the latter having an average of 190 pupils.

Almost every second local authority had a vocational and professional education institution in 1990, the smallest of which had 10 students and the largest 2000, the average being 300. The universities are again distributed evenly throughout the country, the largest one being the University of Helsinki with more than 28,000 students and the smallest the Academy of Dramatic Art, with less than 300 students.

E. 9
Students in vocational and professional education institutions and universities by field of education and sex in 1989

Field of education[1]	*Vocational and professional education institutions* Total	Males %	Females %	*Universities* Total	Males %	Females %
Teacher training (14)	4,005	17	83	12,806	27	73
Fine and applied arts (18)	5,961	26	74	1,947	46	54
Humanities (22)	70	6	94	17,647	25	75
Religion and theology (26)	-	-	-	1,736	55	45
Social and behavioural sciences (30)	-	-	-	10,439	40	60
Commerce and business administration (34)	32,701	31	69	12,943	53	47
Law and jurisprudence (38)	-	-	-	4,075	54	46
Natural sciences (42)	-	-	-	9,244	52	48
Mathematics and computer science (46)	4,364	72	28	5,980	74	26
Medicine and health (50)	29,430	8	92	8,881	35	65
Trade, craft and industry (52)	37,098	82	18	-	-	-
Engineering (54)	16,468	88	12	16,999	85	15
Architecture and town planning (58)	-	-	-	1,553	57	43
Agriculture, forestry and fishery (62)	7,438	68	32	3,184	51	49
Home economics and domestic science (66)	4,275	1	99	149	9	91
Transport and communications (70)	904	85	15	-	-	-
Service trades (78)	13,960	25	75	-	-	-
Others (89)	1,093	88	12	542	53	47
Total	**157,767**	**46**	**54**	**108,125**	**49**	**51**

[1] Unesco: International Standard Classification of Education (ISCED)

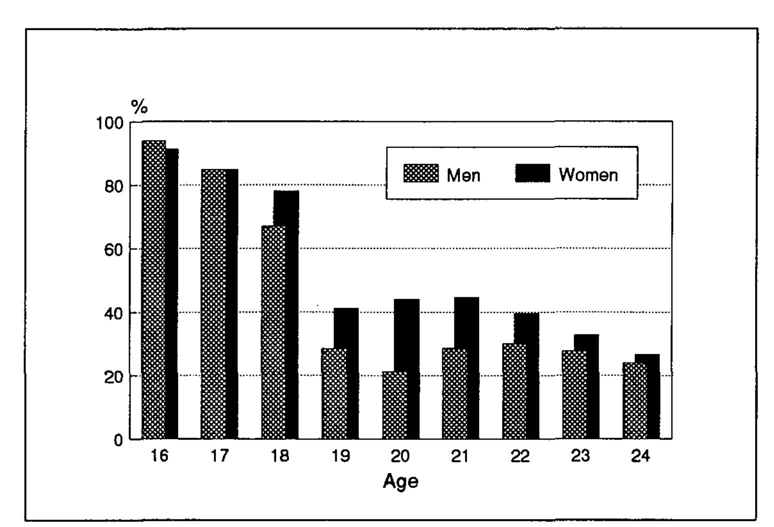
Participation in education

Practically all children aged 7–15 years, i.e. eligible for compulsory schooling, attend comprehensive school, which means that schooling is also provided for the disabled. The number of children exempted entirely from compulsory education amounts to only approx. 0.1% a year. The data are based on education statistics compiled by Statistics Finland.

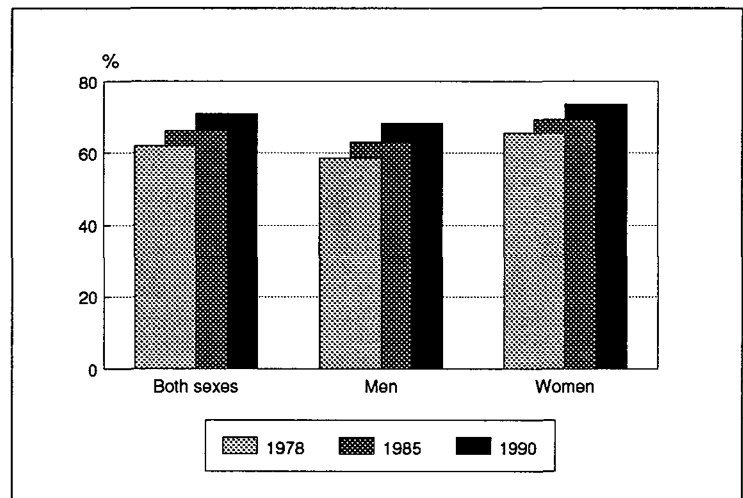
71% of the age group 16–19 years were attending regular schools in 1990, while the corresponding figure ten years before had been 62%. The decrease in the size of the age groups and the increased interest in further education have contributed to the fact that young people are more and more willing to continue their studies beyond the compulsory schooling. More than 80% of young people aged 16 or 17 years were studying in senior secondary schools or vocational schools in 1990.

Attendance for some form of education has increased most markedly in the older age-groups, particularly among women, so that studying is now more common among women in all age groups except for those aged 16 or 17 years. A particularly significant difference between the sexes occurs in the age group 20–24 years, in which the number of men studying in 1990 was 26% and that of women 37%. The corresponding figures for 1978 had been 21% and 25%.

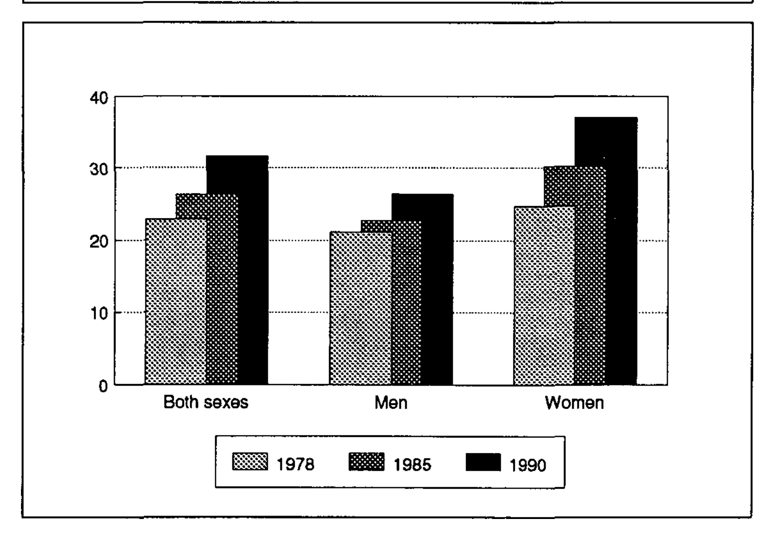
48% of those aged 16–18 years were studying at senior secondary schools, comprising 39% of the males and 57% of the females, and approx. 30% at vocational schools (just under 40% vs almost 25%). Although it is impossible to make a sharp distinction between general and vocational education, it can be estimated that the proportion of young people aged 16–18 years who continue their general education from the comprehensive school to the senior secondary school is higher in Finland than in the other Nordic countries.



E. 10
Enrolment rate by age and sex in 1990



E. 11
Enrolment rates in the age group 16–19 years by sex in 1978–1990



E. 12
Enrolment rates in the age group 20–24 years by sex in 1978–1990

E. 13
Persons aged 16–39 studying in the regular education system by type of institution, as a proportion of the population of the same age by sex in 1990

Age	Comprehensive schools	Senior secondary schools	Vocational and professional education institutions	Universities	Studying	Not studying	Total	Population
	%							Thousands
All								
16–19	3	38	28	2	71	29	100	238
20–24	0	1	17	14	32	68	100	344
25–29	0	1	5	8	14	86	100	377
30–39	0	0	2	3	5	95	100	789
Men								
16–19	3	31	32	2	68	32	100	122
20–24	0	1	13	12	26	74	100	175
25–29	0	0	4	9	13	87	100	193
30–39	0	0	1	3	4	96	100	403
Women								
16–19	3	45	24	2	74	26	100	116
20–24	0	1	21	15	37	63	100	169
25–29	0	1	5	9	15	85	100	184
30–39	0	0	3	3	6	94	100	386

E. 14
Age of students in institutions of upper secondary and tertiary education in 1990

Type of institution	Age group –15	16–19	20–24	25–29	30–	Total	Students
	%						Thousands
Senior secondary schools							
– day classes	0	100	0	0	0	100	88
– evening classes	0	17	20	14	49	100	16
Vocational and professional education institutions	0	40	36	11	13	100	165
Universities	-	4	41	29	26	100	113

13.5% of persons aged 20–24 years were studying at university in 1990, i.e. 12% of the men and 15% of the women, and 17% at vocational and professional education institutions, the figures being 13% for men and 21% for women.

Almost all those studying in senior secondary day schools were under 20 years,while 40% of those studying in vocational and professional education institutions were under 20 years and 60% over that age. More than 50% of those studying at university were over 25 years of age.

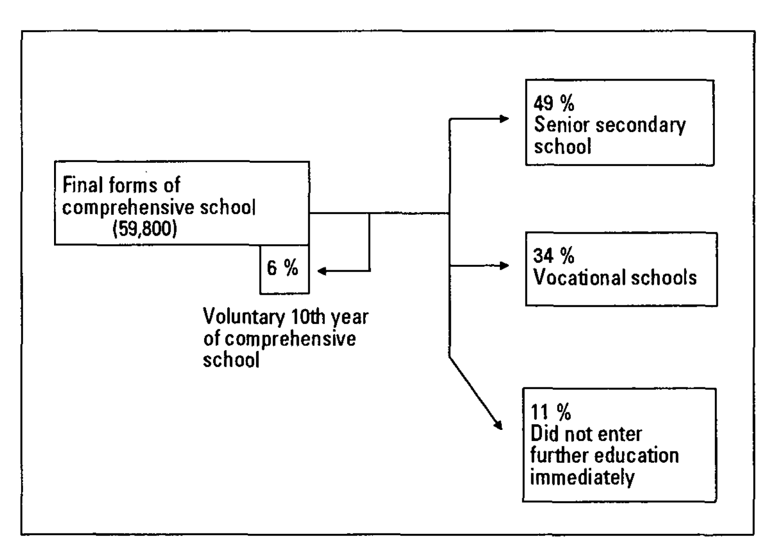
3 Student progression and qualifications obtained

Immediate entrance

82–83% of pupils completing the final form of the comprehensive school in the late 1980's went on immediately to the upper secondary level, while approx. 10% did so in some subsequent year. Thus it can be estimated that over 90% of each age group completing their compulsory education proceed to the upper secondary level. The rate of immediate entry into further education is about the same as in the other Nordic countries. The data are based on the registers of the nationwide scheme for joint selection to secondary schooling maintained by the National Board of Education, while the figures for university entrance are compiled by Statistics Finland.

49% of the age group completing comprehensive school in spring 1989 entered senior secondary school in the following autumn, i.e. 40% of the boys and 59% of the girls, while a further 34% entered vocational schools, 43% of the boys and 24% of the girls.

A total of 28,000 persons matriculated in 1989, of whom less than 40% continued their studies immediately, more than 20% in vocational and professional education institutions and 16–17% in universities. Most of those who matriculate in a given year are not admitted to university until later. It has been estimated, however, that 85–90% of those matriculating in the 1980's continued their studies either at vocational and professional education institutions or at university.



E. 15
Proportion of pupils completing comprehensive school in 1989 and entering the upper secondary level in autumn 1989

Access to upper secondary and tertiary education

The quantification of vocational, professional and university education is governed by law, the government confirming the number of persons admitted to a given educational level, field and branch primarily on the basis of employment needs. The aspirations of young people do not necessarily coincide with the anticipated requirements of the various employment sectors, however, and the number of applicants for some popular fields and levels of education may thus be considerably higher than the quotas allowed, whereas some others will be able to accept all applicants.

Senior secondary schools are also provided with given quotas, although as many as 95% of the applicants have been accepted in the last few years, varying to some extent with region.

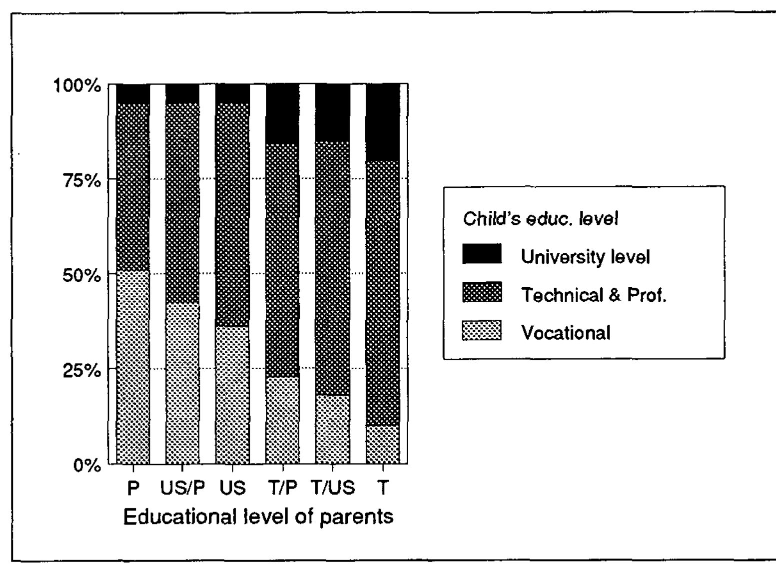
The body of persons applying for vocational and professional education institutions in a given year is composed of two groups of equal size: comprehensive school graduates of the same year and comprehensive school graduates of earlier years. 60% of the applicants were admitted in 1989, over 70% of the boys and over 50% of the girls. Admission was most difficult to institutions of health care and social services which are traditionally popular among women, and easiest to male-dominated schools leading to employment in the timber, mechanical engineering and metalworking industries, to which almost all applicants were admitted.

The number of persons who have matriculated earlier and apply to vocational and professional education institutions or universities is two to three times greater than that of the applicants who have matriculated in the year concerned. Approx. 1/3 of all matriculated applicants have been accepted at vocational and professional education institutions in the last few years, mostly in various technical and professional fields. Entrance is most difficult (20-30% of applicants) in the popular fields of the social services and health among women and forestry among men. Entrance was easiest into schools providing a qualification for work in the clothing, mechanical engineering and metalworking industries, to which more than half of the applicants were admitted.

All branches of university education have a fixed intake per year, the number of university applicants being far in excess of this, so that approx. 1/3 are admitted. Entrance was most difficult into the Theatre Academy (4% of applicants in 1990) and the University of Industrial Arts (17% of applicants in 1990). More than half of the persons applying to read theology, technical subjects and dentistry were admitted in 1990.

Family background

An investigation performed in 1985 concerning persons who had completed the senior secondary school, a vocational or professional education at the secondary or tertiary level or a university degree in that year *(Education and the family background of the young in Finland; Central Statistical Office of Finland, Studies no. 172, Helsinki 1990)* indicates that there are considerable educational differences attributable to family background. The expansion of education has not eliminated the effect of background on a young person's selection of his future educational field. It is more common for children from highly educated, upper class families to enter the senior secondary school and go on to university than it is for children of families with a poorer educational background, while it is more likely that young people whose parents have a low educational level will choose a vocational school. Similarly a rise in the parents' educational level will increase the probability of the child entering the senior



E. 16
Educational level of students with qualifications completed in 1985 by parents' educational level

Educational level of parents:
P = both parents have a primary or lower secondary education
US/P = one of the parents has an upper secondary education and the other a primary or lower secondary education
US = both parents have an upper secondary education
T/P = one of the parents has a university or other tertiary education and the other a primary or lower secondary education
T/US = one of the parents has a university or other tertiary education and the other an upper secondary education
T = both parents have a university or other tertiary education

secondary school and later attending either a vocational or professional college or a university.

The children of blue-collar workers are mainly trained for industrial occupations, e.g. for the paper, pulp and wood processing industries or for work as mechanics and fitters, bricklayers and house-painters, textile workers, cooks or workers in the food industry.

The children of farmers make their way to agricultural occupations and become farmers, farm mechanics, farm managers, livestock breeders and gardeners. Even if they go on into higher education, their choice of subjects will often still reflect their family background, so that they become forestry supervisors, agricultural engineers, or take degrees in agriculture and forestry. Thus the educational choices made by young people from agricultural and working-class backgrounds are characteristically aimed at a rapid transition through education into employment.

The children of white-collar workers are more likely to persist in the education system, many of them aiming to reach as high as possible. As a result of this, they become architects, physicians, jurists, graduate engineers or economists, for example.

In other words, the educational traditions of the white-collar, blue-collar and farming section in the Finnish population are still prominent, and a strikingly clearcut picture emerges when educational differences related to parents' educational level, students' mother tongue, place of residence, sex and even the number of siblings are taken into account.

These considerable educational differences attributable to family background showed little or no signs of diminishing over the first half of the 1980's, although the regional differences have diminished.

Leaving certificates and final examinations

The number of leaving certificates issued and final examinations approved in the regular education system in 1989 was 152,000, of which more than a third were at the compulsory lower secondary level, almost 50% at the upper secondary level and 16% at the tertiary level. More than 50% of pupils obtained a leaving certificate or passing a final examination in non-compulsory education were female. The data are based on the Register of Completed Education and Degrees compiled by Statistics Finland.

The decline in the number of degrees from the previous year was attributable to the reduction in the size of the age groups and the increase in study times caused by the reform of the education system. Thus the time spent on education has become longer and the educational levels of students higher. The level of leaving certificates and final examinations rose by 21% between 1971 and 1989.

Compulsory schooling

The comprehensive school was introduced gradually in the 1970's, and practically the entire age group attending basic education has completed the 9 years of compulsory general education each year since the early 1980's. It is estimated that only approx. 1% of the age group fail to receive a leaving certificate, which means that the number of comprehensive school leaving certificates

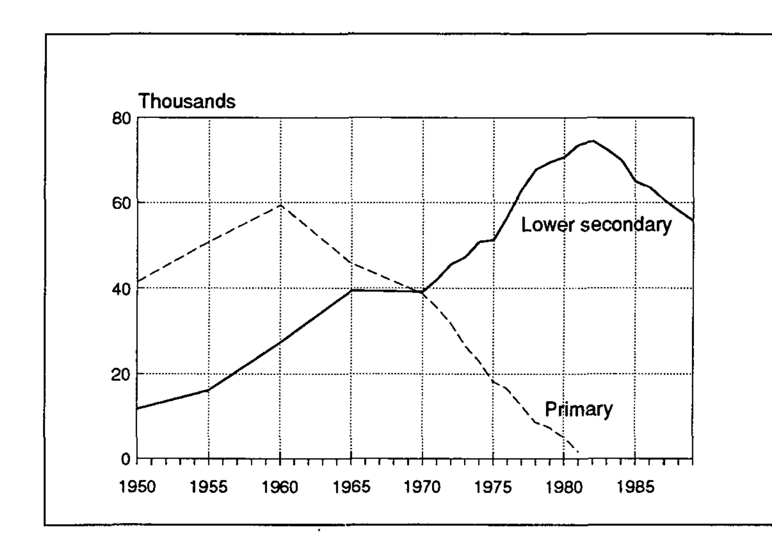
E. 17
Leaving certificates and final examinations in the regular education system in 1989

Type of institution	Certificates Examinations	Change from prev. year %	Women %
Comprehensive	55,800	-3.9	49
Senior secondary	28,000	-2.4	60
Vocational and professional	57,600	-2.4	55
Universities	10,300	-2.2	54
Total	**151,700**	**-2.9**	**54**

E. 18
Leaving certificates and degrees in the regular education system by level of education [1] in 1971–1989

	Primary (1)	Lower secondary (2)	Upper secondary (3)		Tertiary		Total
			General	Vocational	Lower (5)	Higher (6,7)	
1971	35,500	42,000	19,900	41,900	6,800	11,800	157,900
1975	18,100	51,300	24,800	44,700	7,900	13,600	160,400
1980	5,100	70,700	28,700	52,900	9,400	13,300	180,100
1985	-	65,000	31,600	54,000	9,600	11,700	171,900
1989	-	55,800	28,000	43,200	11,200	13,500	151,700

[1] Unesco: International Standard Classification of Education (ISCED)

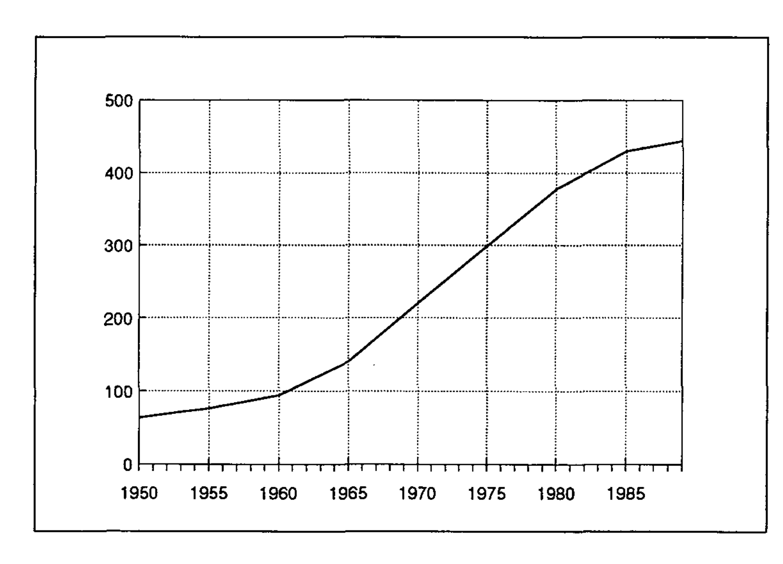


E. 19
Leaving certificates issued at the primary and lower secondary levels in 1971–1989

corresponds to the size and sex distribution of the 16-year age group. In the time before the introduction of the comprehensive school system the age group was divided into two, some pupils receiving 6–8 years of general education at the primary level and others 4 years at primary school followed by 5 years at the lower secondary level.

Matriculation examinations

The senior secondary school leads to a matriculation examination which provides eligibility for university and other tertiary education. 28,000 matriculation examinations were taken in 1989, including 1,700 by students at evening classes.



E. 20
Number of matriculation examinations per thousand 19-year-olds in 1950-1989

Senior secondary schools began to gain in popularity after the Second World War, so that where 4,100 matriculation examinations were completed in 1950, a peak of almost 32,000 examinations was attained in 1984, after which the decrease in the size of the age groups reduced the number matriculating. Approx. 45% of the age group matriculated in the late 1980's, approx. 36% of the men and 54% of the women.

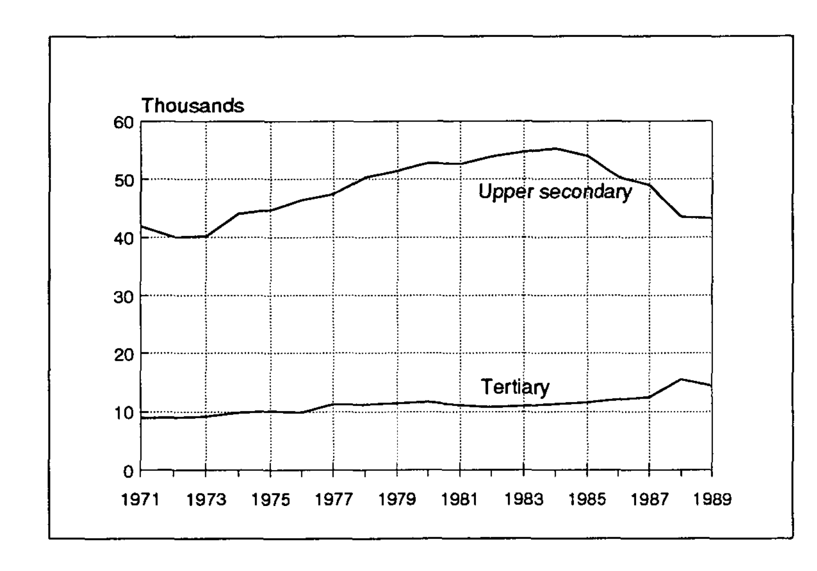
The average age (median) of persons graduating from senior secondary school (excluding evening classes) in 1989 was 19 years and that of persons graduating from evening classes 25 years. Females constituted 60% of the matriculated students.

Vocational and professional education institutions

Leaving certificates obtained from vocational and professional education institutions refer to courses of school-type education which vary in length from one term to six years. Some students may also have completed some other vocational training earlier. The number of students completing upper secondary education of the vocational type began to decline after the mid-1980's, mainly as a result of the decrease in the size of the age groups and a decline in the popularity of vocational education among young people.

The low number of leaving certificates issued by these institutes at the tertiary level in the late 1980's and early 1990's is attributable to the increased duration of study caused by the curricular reform undertaken in these institutes, in spite of the fact that the number of persons studying at this level is steadily increasing.

The average age of persons completing their studies at the upper secondary level at vocational schools in 1989 was approx. 20 years and that at the tertiary level 24-26 years. The greatest numbers of students attended courses in crafts, industrial trades, commerce, medicine and health.



E. 21
Leaving certificates issued and final examinations taken in vocational and professional education institutions by educational level in 1971–1989

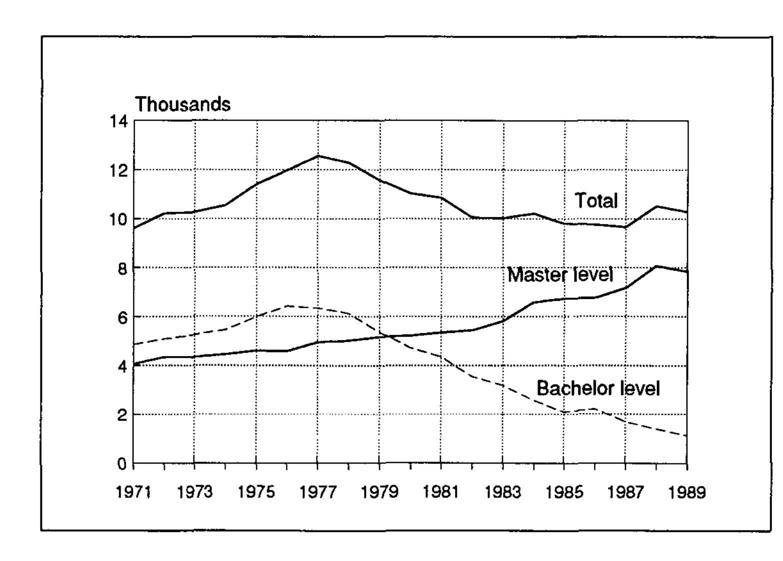
E. 22
Leaving certificates issued and final examinations taken at vocational and professional education institutions by field and level[1] of education in 1989

Field of education	Upper secondary (3)	Tertiary Lower (5)	Upper (6)	Total	%	Women %
Teacher training (14)	458	94	686	1,238	2	88
Fine and applied arts (18, 22)	1,113	298	-	1,411	2	74
Commerce (34)	12,166	175	-	12,341	22	71
Computer programming (46)	-	672	156	828	1	31
Health and medicine (50)	4,703	5,325	-	10,028	17	93
Crafts and industry (52)	13,560	-	-	13,560	24	20
Engineering (54)	-	2,778	1,548	4,326	8	11
Agriculture and forestry (62)	2,541	1,170	989	4,700	8	22
Home economics (66)	3,149	321	-	3,470	6	99
Service trades (78)	4,004	101	-	4,105	7	78
Others (70, 89)	1,511	24	30	1,565	3	11
Total	**43,205**	**10,958**	**3,409**	**57,572**	**100**	**55**
%	75	19	6	100		

1) Unesco: International Standard Classification of Education (ISCED)

Universities

10,300 degrees were taken at universities in 1989, i.e. more than 2% less than in the previous year. The declining trend from the late 1970's onwards has been due to the increased duration of study caused by the reform of the degree system, as the former first degrees of Candidate in the Humanities and Candidate in the Natural Sciences were abolished and that of Candidate in Economics and the class teacher qualification were raised to master's level. Consequently all first degrees are now the equivalent of a master's degree and take an average of 6–8 years to complete (as of the late 1980's). Thus the average age (median) of persons taking a basic degree in 1989 was 27 years.

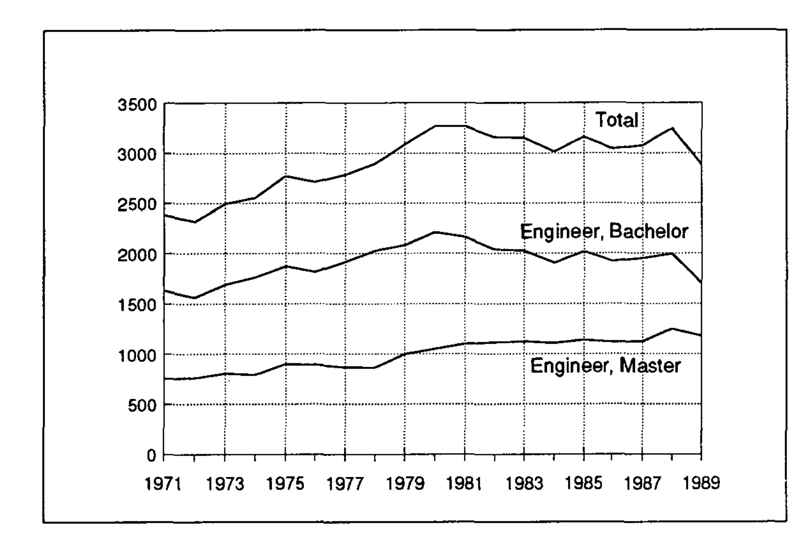


E. 23
University degrees by level in 1971–1989

E. 24
University degrees by field and level in 1989

Field of education[1]	Bachelor level	Master level	Postgraduate level	Total	%	Women %
Teacher education (14)	546	1,484	29	2,059	20	77
Humanities, theology, arts (18, 22, 26)	68	980	115	1,163	11	69
Business administration, economics, social and behavioural sciences, law (30, 34, 38)	306	2,426	152	2 884	28	53
Natural sciences, mathematics and computer science (42, 46)	31	842	256	1,129	11	38
Medicine (50)	171	669	591	1,431	14	59
Engineering (54)	-	1,046	150	1,196	12	15
Agriculture, forestry (62)	-	296	25	321	3	46
Others (58, 66, 89)	-	95	9	104	1	52
Total	**1,122**	**7,838**	**1,327**	**10,287**	**100**	**54**
%	11	76	13	100		

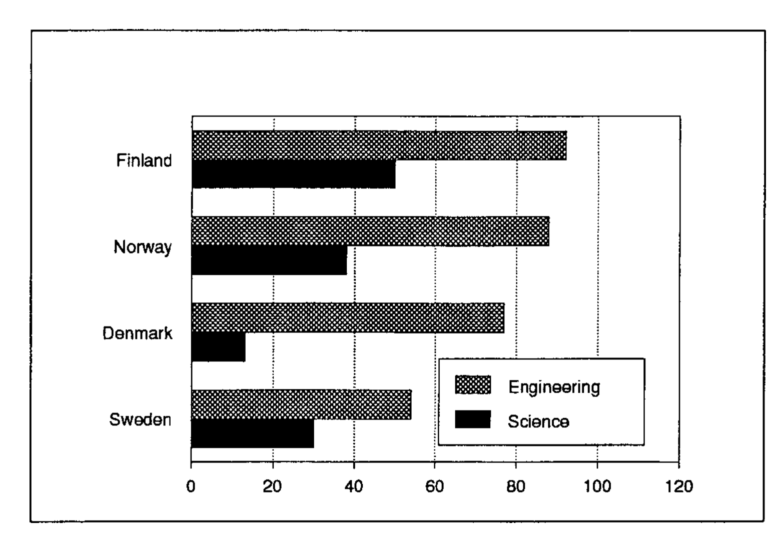
[1] Unesco: International Standard Classification of Education (ISCED)



E. 25
Engineering graduates in 1971–1989

Vocational qualifications such as that of nursery school teacher, pharmacist, socionomist and associate in laws still exist at the bachelor level. Postgraduate degrees include the licentiate and doctorate, specialist physician, specialist dentist and specialist veterinary surgeon.

A total of 2,900 engineering degrees were awarded in universities and technical institutes in 1989, of which 40% were those of Diploma in Engineering from universities (=master's level) and 60% those of Engineer (=bachelor's level) taken in technical institutes. The number of engineering degrees declined temporarily in 1989 as a result of an approx. 1-year increase in study times caused by the curricular reform, bringing the total study time to 5–6 years in technical institutes.



E. 26
Science and engineering graduates per 100,000 persons aged 20-64 in the Nordic countries in 1988

The numbers of degrees in science and engineering awarded in the Nordic countries in 1988 are compared in Fig. E. 26, based on first degrees (at the bachelor's or master's level), which correspond to those of ISCED fields 42, 46 and 54 and normally require at least three years of post-secondary education. The highest incidence of science and engineering degrees relative to the population of age 20-64 years was attained in Finland.

Ph.D. and other equivalent degrees

Ph.D. and other equivalent degrees comprise all licentiate or doctoral degrees other than those of Licentiate in Medicine, Dentistry or Veterinary Medicine, which serve as basic qualifications in their field. Work for a doctoral degree can set out either from a prior licentiate degree or directly from a

E. 27
Ph.D. and other equivalent degrees in Finland in 1971–1989

Field of education[1]	1971				1980				1989			
	Licentiate	Doctoral	Total	%	Licentiate	Doctoral	Total	%	Licentiate	Doctoral	Total	%
Arts, humanities, religion, theology (18, 22, 26)	49	20	69	14	49	28	77	13	81	34	115	13
Business administration, economics, social and behavioural sciences, law (30, 34, 38)	78	21	99	20	90	35	125	20	98	54	152	17
Natural sciences, mathematics and computer science (42, 46)	104	48	152	31	109	79	188	31	155	101	256	28
Health and medicine (50)	.	61	61	12	2	93	95	15	17	144	161	18
Engineering (54)	54	19	73	15	59	33	92	15	111	39	150	17
Agriculture, forestry (62)	11	15	26	5	8	14	22	4	12	13	25	3
Others (14, 58, 66, 89)	11	5	16	3	8	7	15	2	23	15	38	4
Total	**307**	**189**	**496**	**100**	**325**	**289**	**614**	**100**	**497**	**400**	**897**	**100**
Women %	17	7	13		24	20	22		33	34	34	

1) Unesco: International Standard Classification of Education (ISCED)

first degree. The number of Ph.D. and other equivalent degrees increased during the 1980's, so that almost 500 licentiate degrees were taken and 400 doctoral dissertations approved in 1989. The median age of persons taking a licentiate degree in 1989 was 34 years and that of persons publishing a doctoral dissertation 37 years. The proportion of women has increased constantly, being 13% in 1971 and 34% in 1989. Most of the degrees were taken in the field of natural sciences.

4 Resources

Teachers

As indicated by the employment statistics of Statistics Finland, a total of approx. 130,000 people were employed within the formal education system in 1988, accounting for 5.5% of the country's labour force.

The number of teachers employed in the regular education system, and especially in the vocational and professional education institutions, increased by 15% between 1981 and 1989, amounting to a total of more than 69,000 persons by the latter year, while the number of students increased by 2.5% during the same period. 56% of the teachers employed in the education system in 1989 were women. The data are based on the teaching staff registers maintained by the National Board of Education.

E. 28
Total staff employed in the formal education system in 1988

Type of institution	Staff	Women, %
General regular and adult education	79,000	72
Vocational and professional	30,000	59
Universities	20,000	52
Total	**129,000**	**66**

E. 29
Teachers employed in the regular education system iin 1989

Type of institution	Teachers	Change from 1981 (1981 = 100)	Women, %
Comprehensive	37,900	109	63
Senior secondary	5,600	107	60
Vocational and professional	18,100	132	49
Universities	7,700	120	33
Total	**69,300**	**115**	**56**

Expenditure

Expenditure on the formal education system in 1989 was approx. FIM 29,000 million[1] in 1989, i.e. 5.6% of the gross national product, showing an increase in real terms of 4.3% over the previous year, and of as much as 8% in the case of the vocational and professional education institutions. Comprehensive schools accounted for 44% of the expenditure, vocational and professional education institutions for 25%, the universities for 15%, and senior secondary schools and adult education both for 8%. The above data are based on cost records kept by the National Board of Education.

1) As indicated in Table E. 30, capital costs constituted FIM 1.7 thousand million in 1989. It can be estimated from National Accounts that the capital costs provided in the above table are too low, as in reality they amount to FIM 3 thousand million bringing total expenditure to approximately over FIM 29 thousand million.

E. 30
Expenditure on the formal education system in 1989

Type of institution	Current	Capital[1]	Total	Real change from previous year
	FIM million			%
Comprehensive	11,520	818	12,338	1.9
Senior secondary	2,091	142	2,233	0.5
Vocational and professional	6,410	564	6,974	8.0
Universities	4,166	152	4,318	7.9
Adult education	2,126	56	2,182	4.1
Total	**26,313**	**1,732**	**28,045**	**4,3**

1) It can be estimated from National Accounts that the capital costs provided in the above table are too low, as in reality they amount to FIM 3 thousand million bringing total expenditure to approximately over FIM 29 thousand million.

E. 31
Current expenditure on the formal education system in 1989

Type of institution	Salaries	Other	Total	Real change from previous year
	FIM million			%
Comprehensive	8,536	2,984	11,520	1.0
Senior secondary	1,485	606	2,091	-0.3
Vocational and professional	3,588	2,822	6,410	6.5
Universities	2,088	2,078	4,166	7.6
Adult education	1,285	841	2,126	4.3
Total	16,982	**9,331**	**26,313**	**3.5**
%	64.5	35.5	100.0	

Operating expenses in 1989 were in excess of FIM 26,000 million, the increase in real terms over the previous year being 3.5%. Wages and salaries constituted 64.5% of these, over 70% in the case of the comprehensive schools and senior secondary schools and slightly over 50% in the vocational and professional education institutions and universities. The operational expenses included a total of FIM 1.3 million for student grants allocated by the state.

Public expenditure on education

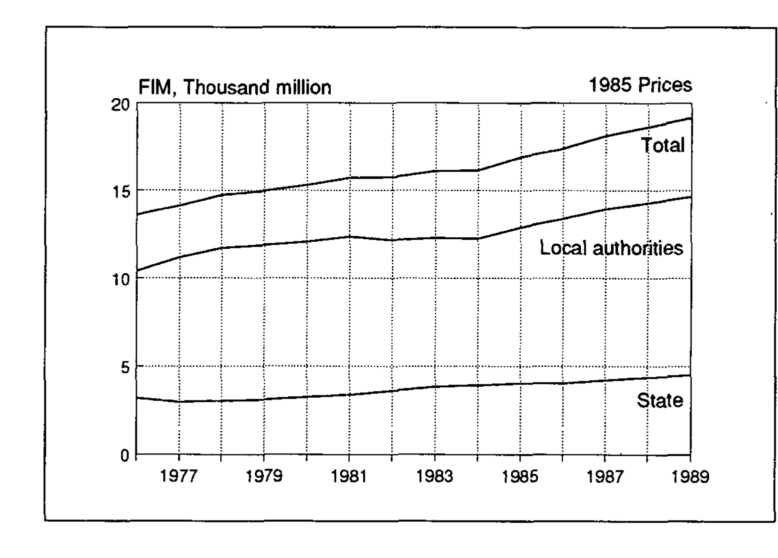
Approx. 90% of the costs of Finland's educational institutions are met by the state and local authorities. The figures presented in the following are based on the national accounts prepared by Statistics Finland and include net expenditure and depreciation allowances for fixed capital.

The public sector spent approx. FIM 25,000 million on education in 1989, 24% by the state and 76% by the local authorities. Public sector spending on education as a proportion of the gross national product varied from 4.9% to 5.2% between 1976 and 1989.

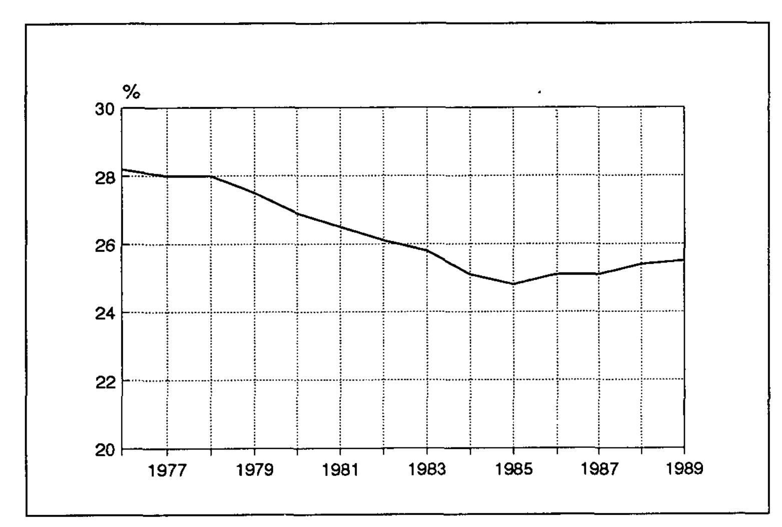
Public spending on education had increased by 2.8% in real terms by comparison with 1988, with an average increase of 2.7% a year between 1976 and 1989, while total public expenditure increased 1 percentage point faster during the same period, at an average rate of 3.7% a year. The proportion of total public expenditure devoted to education decreased in the period up to the mid-1980's, when it was 24.8%.

E. 32
Public final consumption expenditure on education in 1976–1989

	State	Local authorities	Total	1985 prices	Proportion of all public expenditure	Real growth from previous year
	FIM million				%	%
1976	1,479	4,526	6,005	13,599	28.2	
1977	1,480	5,249	6,729	14,130	28.0	3.9
1978	1,600	5,764	7,364	14,744	28.0	4.3
1979	1,794	6,429	8,223	14,976	27.5	1.6
1980	2,077	7,309	9,386	15,318	26.9	2.3
1981	2,406	8,407	10,813	15,737	26.5	2.7
1982	2,840	9,319	12,159	15,760	26.1	0.1
1983	3,295	10,479	13,774	16,116	25.8	2.3
1984	3,598	11,406	15,004	16,155	25,1	0.2
1985	4,025	12,890	16,915	16,915	24.8	4.7
1986	4,201	14,380	18,581	17,397	25.1	2.8
1987	4,714	15,734	20,448	18,137	25.1	4.3
1988	5,354	17,153	22,507	18,645	25.4	2.8
1989	5,867	19,085	24,952	19,166	25.5	2.8



E. 33
Public consumption expenditure on education in 1976–1989



E. 34
Education as a proportion of all public consumption expenditure in 1976–1989

5 Educational achievement in the population

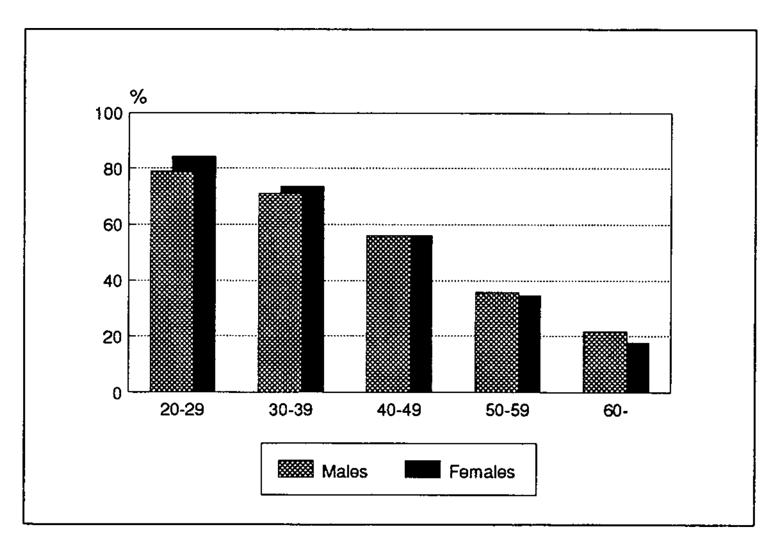
Almost two million people in 1989 had completed some course of upper secondary or tertiary education, i.e. a half of the population aged 15 years and over, including more than a third at the upper secondary level and 13% at the tertiary level. The data are from the Register of Completed Education and Degrees maintained by Statistics Finland.

The Finnish population is characterized by the high educational level of its young people, especially the young women, and the fact that only a minor proportion of the older age-groups have completed any form of post-compulsory or tertiary education, as indicated in Fig. E 36.

E. 35
Population aged 15 years or over by highest educational qualification at the end of 1989

Level of education[1]	Males		Females		Total	
	Thousands	%	Thousands	%	Thousands	%
Primary and lower secondary (1,2)	932	48	1,084	52	2,016	50
Upper secondary (3)	709	37	768	37	1,477	37
Tertiary (5,6,7)	280	15	239	11	519	13
Total	**1,921**	**100**	**2,091**	**100**	**4,012**	**100**

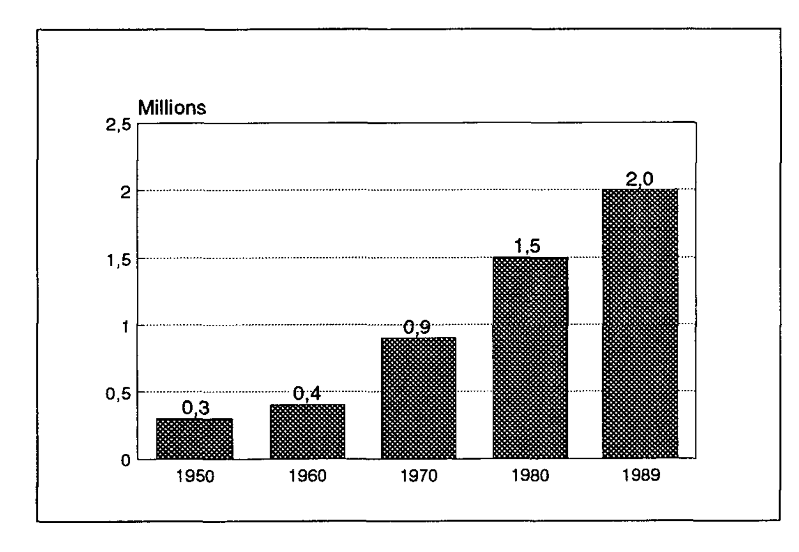
[1] Unesco: International Standard Classification of Education (ISCED)



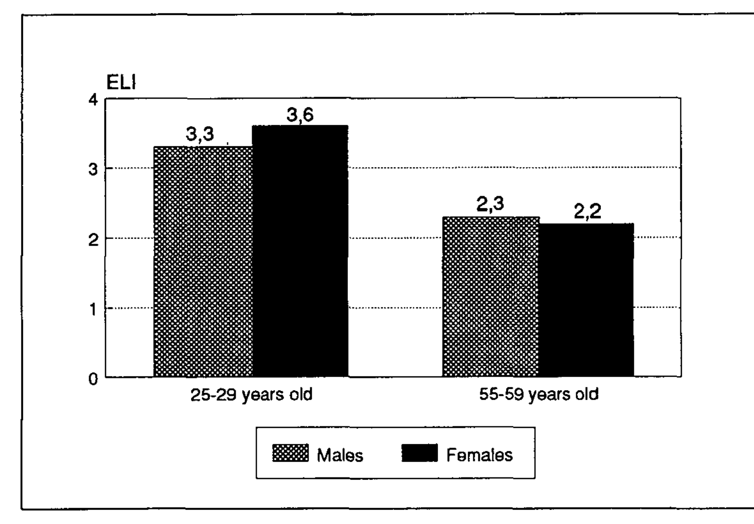
E. 36
Proportion of the population with some upper secondary or tertiary educational qualification by age and sex in 1989

The proportion of the population having some form of post-compulsory school or university education has increased markedly since the Second World War, the number of persons taking the matriculation examination, qualifying from vocational and professional education institutions or receiving a university degree having doubled between 1960 and 1970 and again by the end of the 1980's.

This increase in the proportion of the educated population has been accompanied by an increase in the level of education, as measured by an indicator (ELI)[1)] developed by Statistics Finland's Education Statistics



E. 37
Population with an upper secondary or tertiary educational qualification in 1950–1989



E. 38
Educational level of the population (ELI)[1)] in the age groups 25–29 years and 55–59 years by sex in 1989

1) $\overline{X} = \sum_{i=1}^{n} f_i x_i \Big/ \sum_{i=1}^{n} f_i$

$\overline{X}$ = ELI (Educational level indicator)
x_i = level code of the Finnish Standard Classification of Education
f_i = number of persons

Division. Where this index of educational level was 2.1 in 1970, it had increased to 2.7, i.e. by 29%, by the end of 1989. The index for the male population alone increased by 27% over this period and that for the female population by 30%.

The educational level of young people is higher than that of their parents, as indicated in Fig. E. 38, which shows the educational level of between persons aged 25–29 years to be more than one third higher than that of those aged 55–59 years. The level among young women is just under 10% higher than that among young men, whereas that of the women in the older age groups is lower than that of the men.

The sex structure of the total population in terms of educational level is characterized by the higher number of women at lower educational levels and the higher number of men at higher levels. More than 80% of the women have a qualification in the field of health and medicine or in the service sector and over 80% of the men in the natural sciences and engineering.

There are also regional differences in the educational level of the population. In Table E. 40 the local authority districts are divided into three groups by reference to the proportion of their urban population: 1) urban (at least 90% of the population dwelling in urban areas), 2) semi-urban (60–89% dwelling in urban areas) and 3) rural (less than 60% dwelling in urban areas).

E. 39
Population aged 15 years or over by field and level[1] of education and by sex in 1989

Field of education	Level of education: Primary, Lower secondary (1,2)	Upper secondary (3)	Tertiary: Lower (5)	Higher (6,7)	Total	Men	Women
	Thousands					%	%
General	2,016	304			2,320	45.3	54.7
Humanities, fine arts (18, 22, 26)	-	12	5	38	55	30.8	69.2
Teacher training (14)	-	8	37	25	70	27.3	72.7
Law, social sciences (30, 38)	-	-	-	35	35	53.8	46.2
Commerce, business administration (34)	-	280	6	38	324	30.0	70.0
Trade, craft, industrial (52)	-	488	-	-	488	79.0	21.0
Natural sciences, engineering (42, 46, 54)	-		91	95	186	88.8	11.2
Health and medicine (50)	-	74	90	22	186	10.9	89.1
Agriculture, forestry (62)	-	95	10	11	116	72.8	27.2
Service trades (78)	-	103	1		104	14.7	85.3
Others (66, 70, 89, 58)	-	113	4	11	128	36.6	63.4
Total	**2,016**	**1,477**	**244**	**275**	**4,012**	**47.9**	**52.1**
Men %	46.2	48.0	48.2	59.2	47.9		
Women %	53.8	52.0	51.8	40.8	52.1		

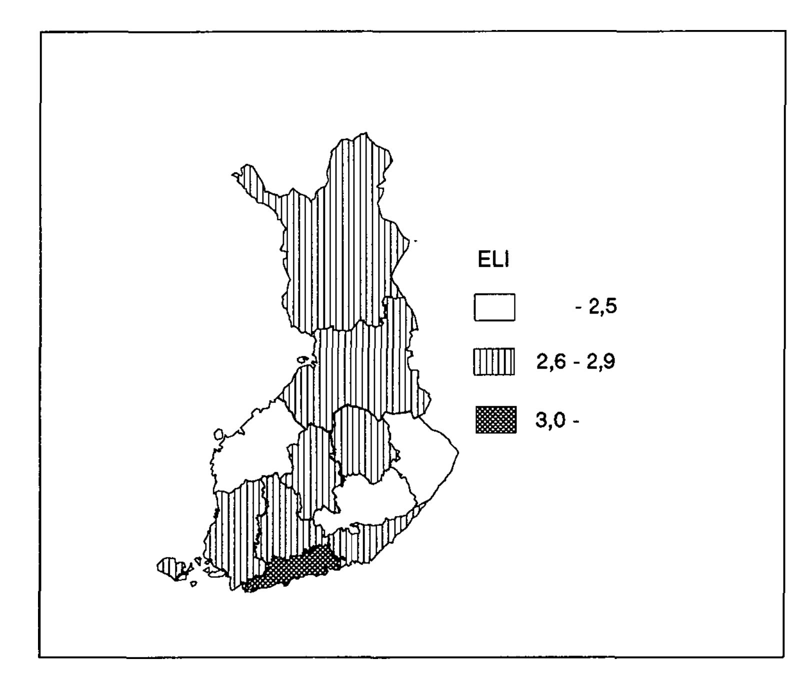
[1] Unesco: International Standard Classification of Education (ISCED)

55% of the population aged over 15 years and almost 60% of all persons with post-compulsory school or university education lived in urban districts in 1989, and less than one third of the population and only slightly over 25% of the educated population lived in rural districts. The educational level of the urban population was 20% higher than that of the rural population.

The educational level is highest in and around the capital, Helsinki, with only minor differences between the provinces elsewhere in the country.

E. 40
Educational level of the population aged 15 years or over by level of urbanization in 1989

Level of urbanization	Population		Population with upper secondary or tertiary education		ELI
	Thousands	%	Thousands	%	
Urban	2,205	55.0	1,192	59.7	2.9
Semi-urban	514	12.8	253	12.7	2.6
Rural	1,293	32.2	551	27.6	2.4
Total	**4,012**	**100.0**	**1,996**	**100.0**	**2.7**



E. 41
Educational level (ELI) of the population aged 15 years or over by provinces in 1989

6 Adult education

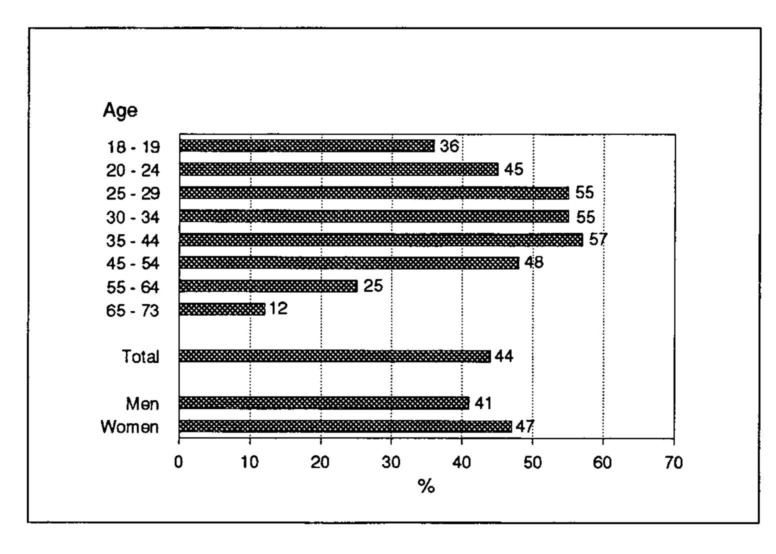
According to preliminary data from the Adult Education Survey conducted by Statistics Finland, 1.6 million persons attended adult education in 1990, i.e. 44% of the population aged 18–73 years (41% of the men and 47% of the women). More than one million persons attended adult education in order to advance their career.

Participation in adult education has increased rapidly since 1980, when approx. one million persons were attending, i.e. 30% of the population, 25% of the men and 34% of the women.

Adult education is provided within the formal education system, at places of work, by various organisations etc. One third of all adult participants were educated within the formal education system and two thirds outside the system, the latter type of course being of much shorter duration. 55% of the students engaged in adult education were women.

E. 42
Adult education participated in by persons aged 18–73 years in 1990: distribution by type of educational system or scheme

Type of educational system	%	Women %
Formal education system		
– regular education system	14	60
– adult education centres	17	78
– other schools and institutes	3	63
Outside the formal education system		
– employers	36	50
– organisations, unions	12	54
– others	18	51
Total	**100**	**55**



E. 43
Participants in adult education in 1990 by age group

Adult education in the formal education system

Adult courses are provided at schools, institutes and universities within the regular education system, which adapt their teaching to adult needs, leading to the same diplomas and qualifications as the corresponding courses for young people. Adult education is also provided in the form of short supplementary courses.

There were 17 senior secondary schools providing only evening courses in 1990, and such courses were also available in 32 ordinary senior secondary schools, the number of students being approx. 24,000. These courses provide education for employed persons who wish to complete their comprehensive school or senior secondary school education or take the matriculation examination. The number of students matriculating from these in 1990 was 1650.

There were 513 vocational and professional education institutions providing adult education in 1989, including 42 centres for vocational courses, 42 specialized vocational institutes devoted entirely to adult education, and 138 vocational and professional education institutions with a separate adult education section. 378,000 persons were participating in adult education in 1989. Of them, more than 6,000 were completing a 1–4-year course leading to either an upper secondary or tertiary-level qualification and 25,000 were engaged in occupational retraining programmes. The other forms of adult education were mainly short courses.

In addition to undergraduate and post-graduate courses, the universities also provide supplementary professional education and open university courses. There is a separate division for supplementary education in every university, a total of 1,800 courses being provided for some 57,000 students in 1989. Supplementary education at the university level is also provided by the summer universities, which attracted 33,000 students in 1989.

In addition to the ordinary universities and summer universities, open university-level courses are also provided at adult education centres and folk high schools. The number of students attending open university courses in 1989 was 33,700.

Folk high schools, adult education centres and study circles constitute the system of liberal adult education in Finland. According to data for 1989 provided by the National Board of Education, the number of folk high schools numbered 93 and had an enrolment of about 6,000 in their basic courses and 68,000 in various occasional courses. The folk high schools are typically boarding schools which focus on providing a general cultural education or instruction in leisure-time activities or matters of topical interest.

The adult education centres constitute the largest providers of adult education with respect to the number of students involved. These institutions numbered 278 in 1989, of which 90% were owned by local authorities and the rest were privately owned. The number of students attending them amounted to more than 0.6 million. Adult education centres, i.e. workers' and citizens' institutes, provide an opportunity to study general and practical subjects and arts and crafts, and most of them also arrange comprehensive school, senior secondary school and open university courses.

Study circle centres are organisations maintained by various educational associations for the purpose of arranging study groups, courses and lectures. There were more than 150,000 participants in study groups and more than 200,000 in various other courses in 1989. The number of public lectures held was 7,400.

The costs of liberal adult education and that provided by various organisations are covered 50-80% by state subsidies, the remainder of the finance being provided by the local authorities, the maintaining organisations and students' fees. The tuition costs of adults who study in vocational and professional education institutions are shared by the state and the local authorities, occupational retraining is financed from state funds and in-service training mainly by employers. Adult students are entitled to substantial financial subsidies during periods of full-time study.

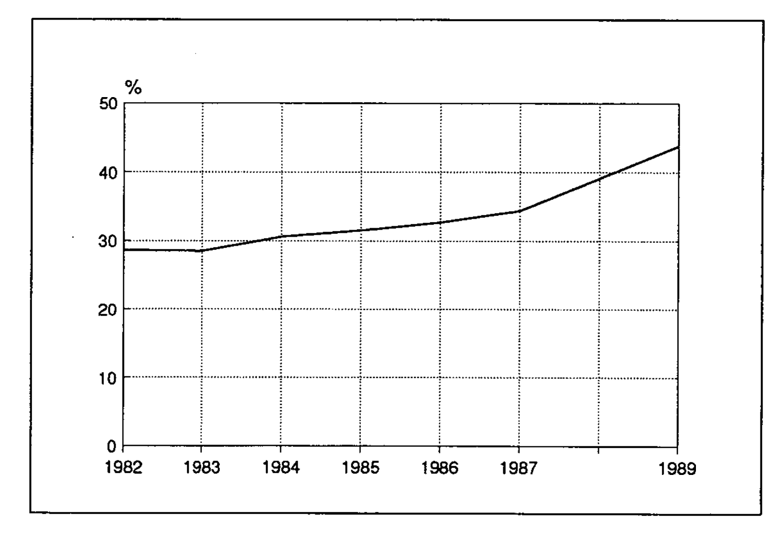
In-service training

In-service training denotes any professional or trade union training provided in the form of a structured course, the costs of which are partly or entirely covered by the employer or with respect to which the participant receives compensation for his loss of leisure-time. The following data are based on a labour force survey performed by Statistics Finland and on the educational statistics derived from it. The figures include only employees aged 15-64 years.

Some 0.9 million employees aged 15-64 years attended in-service training in 1989, i.e. about 44% of all employees in the age group. Women attended in-service training more frequently than men, 45% vs. 43%. The number and proportion of persons of the labour force receiving such training increased rapidly in the late 1980's in particular.

E. 44
Employees attending in-service training in 1982–1989

Year	Employees total	Employees attending in-service	As a proportion of all employees %	Average number of training days per year
1982	1,979,000	565,000	28.6	7.3
1983	1,997,000	569,000	28.5	7.6
1984	2,047,000	626,000	30.6	7.4
1985	2,067,000	652,000	31.5	7.1
1986	2,042,000	667,000	32.7	7.0
1987	2,012,000	693,000	34.4	6.5
1989	2,073,000	907,000	43.8	6.0



E. 45
Employees attending in-service training as a proportion of all employees in 1982–1989

Persons aged 35-44 years attended in-service training most frequently, more than half of the employed women and almost half of the men in the age group doing so in 1989.

Persons with a tertiary-level education attend in-service training most frequently, their proportion being approx. 75% in 1989, while 40% of persons with an upper secondary education and approx. 30% with a primary or lower secondary education did so. The most highly educated persons received the greatest amount of in-service training.

At the same time as the number of persons attending in-service training had increased compared with the situation in 1982, the number of training days had declined, the average being 6.0 days per person in 1989 compared with 7.3 in 1982. Men received more training than women, an average of 7.1 days a year, while the figure for women was 5.0 days.

Tilastokeskus
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Koulutus ja tutkimus 1991:11
Education and research

Education in Finland 1991



This booklet describes the main features of the Finnish educational system and provides statistics on its operation. Using international concepts and classifications, it covers the most important developments and trends in both regular school and university education and other forms of education.

Educational data from the end of the Eighties:

- The formal education system employed 5.5 per cent of Finland's labour force. Over 90 per cent of the costs of Finland's formal education institutions were met by the state and local authorities.
- Approx. one million persons, or one-fifth of the population, participated in preprimary or regular school education. Educational establishments numbered 6,000.
- Approx. 90 per cent of each age group completing their compulsory education proceeded to the upper secondary level of education. All branches of university education have a fixed intake per year, about one-third of the applicants being admitted.
- The Finnish population is characterized by the high educational level of its young people, especially young women, and by the low educational level of the older age groups.
- In 1990, 1.6 million persons, or 44 per cent of the population aged 18–73 years, participated in adult education. The percentage for men was 41; for women 47.

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